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ABSTRACT

The papers contained in this volume are the result of nine seminars conducted during 1972 and the first half of 1973. One concern that dominates many papers is the preparation of individuals for the teaching role. O'Neill reports the evaluation results of a preservice program that maximizes the use of field experiences; Duffey discusses the results of his study designed to evaluate undergraduates in social studies methods courses; Ashlock presents a rationale for the need of certification for elementary school mathematics specialists; after analyzing texts used in reading methods courses, Moretz and Davey assert the need for more consistent use of reading terminology; Amershek urges professional competence as the criterion for the selection of staff members for preschool programs. Another concern reflected in many of the papers is the nature of school programs for learners. Maley describes the impact of a reading emphasis industrial arts program; Gantt advocates a focus on the child's educational environment; Shields discusses reading in the kindergarten; and Hall and Ribovich build a rationale for teaching reading as a form of communication. Following each paper is a brief summary of participant reactions. (WR)

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Papers

from the

POSITION PAPER SEMINARS

Jerilyn K. Ribovich, Editor
Reading Center
University of Maryland

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Summer, 1973

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VIEWS ON EDUCATIONAL ROLES AND OBJECTIVES

POSITION PAPERS

IN

EARLY CHILDHOOD-ELEMENTARY EDUCATION

READING CENTER

COLLEGE OF EDUCATION . UNIVERSITY OF MARYLAND

PREFACE

The educational process often involves the interactive relationship between two people: the learner and the teacher. Curricular and pedagogical decisions that are designed to facilitate learning are constantly being made. Some of these decisions are exclusive to teachers while an increasing number of decisions are being left up to students. The decision-making base of the teacher-learner relationship has intrigued scholars in the past and is evoking considerable interest in the present.

Two specific interests include the *roles* of both teacher and learner and the *objectives* that guide what is done in the name of educational instruction. Both these considerations have been topics of discussion among the members of the Early Childhood-Elementary Education Department of the University of Maryland.

Since interest deserves expression, the Reading Center of the University of Maryland traditionally provides a forum for discussion of relevant educational issues open to all those interested. This forum is designed as a series of position paper seminars at which individual faculty and doctoral students briefly summarize their particular position as reflected in their written paper and then invite reactions and questions. The papers contained in this volume are the result of nine seminars conducted during 1972 and the first half of 1973. They include a broad range of topics that relate to educational roles and objectives.

One concern that dominates many papers is the preparation of individuals for the teaching role. O'Neill reports the evaluation results of a pre-service program that maximizes the use of field experiences; Duffey discusses the results of his study designed to evaluate undergraduates in social studies methods courses using a paper-and-pencil instrument; Ashlock presents a rationale for the need of certification for elementary school mathematics specialists; after analyzing texts used in reading methods courses, Moretz and Davey assert the need of more consistent use of the reading term "decoding" as well as other reading terminology; McLoone urges professional competence as the criterion for selection of staff members for pre-school programs.

Another concern reflected in many of the papers is the nature of school programs for learners. Maley describes the impact of a reading emphasis in Industrial Arts programs; in discussing the "educationally disadvantaged" child, Gantt advocates a focus on the child's educational environment; Shields discusses reading in the kindergarten and outlines six exigencies in kindergarten programs; Hall and Ribovich build a rationale for teaching reading as a form of communication and suggest alternatives for selected reading practices.

These papers are arranged in this volume in the same order as they were presented. Following each paper is a brief summary of participant reactions during the seminar.

It is hoped that these papers will be as much a source of thoughtful stimulation to you, the reader, as they were to those present at the seminars.

Jerilyn K. Ribovich
Summer, 1973
College Park, Maryland

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THE USE OF FIELD EXPERIENCES IN THE PREPARATION OF ELEMENTARY SCHOOL TEACHERS

Leo W. O'Neill

The title of this series of papers suggests that the contributor state and support a "position" on some issue or topic. This charge seemed well suited to the topic, "The Use of Field Experiences in the Preparation of Elementary School Teachers." Subsequent reflection led to the conclusion that positions have been clearly stated and implemented by colleagues over a period of many years. The topic thus seemed more appropriate to a study of the historical development of field experiences than to the formulation of a novel or controversial position.

The record is voluminous. In addition to the required field experience required for EDUC 300, some classroom activity in an elementary school has been scheduled by instructors in "methods" courses since 1955-56. The Feasibility Study incorporated this into a planned total program. At present, instructors of blocked courses make varying provisions for field experience in relation to the courses. Positive reactions of students to field experiences have been reported in a paper in this series (Grimes, Priest, & Brigham, 1972).

Denied the function of discovery, this paper is addressed to the reporting of some exploration of the territory of field experiences. The field experiences upon which this report is based were scheduled in the fall semester of 1971-72 for a group of 33 students participating in the Professional Year Program.

The limited amount of data obtained will be applied to two questions: What did the students do in the elementary classrooms to which they were assigned? What were the students' reactions to the field experiences? A concluding statement will identify one problem presented by the extensive use of field experiences.

A brief description of the Professional Year Program will provide a frame of reference for the data used in this report. The program was planned as a two-semester sequence. The students would complete the six professional courses required for admission to student teaching during the first semester and continue with student teaching in the second semester. The two elementary and one middle school Teacher Education Centers of Howard County Public Schools would provide both classroom assignments for the students and a room for instruction in the six professional courses. All activities would thus be located in the schools of the cooperating school system.

During the fall semester, course meetings were scheduled on one and one-half days per week, and students spent two and one-half days each week in the elementary classroom to which they were assigned. There was no attempt to allocate a given half-day in the classroom to a given course. Instructors of each course designated activities to be carried out in the classroom, and the students selected the

appropriate time from the three mornings and two afternoons available.

The students were assigned in pairs to classrooms in five elementary schools and two middle schools in the three teacher education centers. All of the schools had chosen to participate in the program, and each teacher had chosen to work with a pair of students. The paired arrangement was adopted to provide the students with support and feedback from a peer and to reduce the number of classrooms required for this program.

The task of organizing and planning this program was given higher priority than the developing of instruments to be used for evaluating its effectiveness. The data reported in this paper were perceived primarily as a means of testing the adequacy of the instruments. Provision was not made to require each student to respond, and some did not provide the information requested.

Activities of Students in Elementary Classrooms

Field experiences were incorporated into the Professional Year Program with the expectation that the students would have a wide range of experiences. However, the classroom teachers involved in the program were merely asked to provide an opportunity for the students to work with one or more pupils, using practices recommended in the professional courses. In order to determine the nature of the activities in which the students were engaged, a form was developed on which a student could report (to the nearest quarter hour) the distribution of his classroom time on one day in a given week.

The responses of 26 students who reported for the week of November 14-17, 1971, are summarized in Table 1.

TABLE 1

STUDENTS' REPORT OF THE DISTRIBUTION OF CLASSROOM ACTIVITIES ON ONE DAY DURING THE WEEK OF NOVEMBER 14-17, 1971

Activity	Number of Students Reporting	Average Time Reported (Min.)	Range of Time Reported (Min.)
Conference*	26	45	15-105
Observation	22	60	15-165
Assisting with routines	15	40	15-120
Directing routine activity	12	45	15-75
Preparing instructional materials or plans	20	80	30-180
Checking pupils' work	14	45	15-120
Working with individuals	19	80	15-150
Working with small groups	14	45	30-120
Working with instructional group	10	45	15-135

*Includes conferencing with teacher, principal, and center coordinator.

The average time spent in each category of activities indicates a reasonably even distribution, but the range for each category shows substantial variation. Several of the extreme items probably reflect unusual situations in classrooms. However, the range is not greatly

reduced when extreme items are eliminated. For example, the range of time spent in observation is only reduced from 15-165 minutes to 30-120 minutes after two items at each extreme are excluded.

Students reported specific activities in two ways. Instructors of the professional courses required the students to conduct designated activities in the classroom, and these were reported to the instructor. No teacher stated an objection to this kind of assignment, and several applauded this as a welcome addition to the program in their classrooms.

In addition to these reports to instructors, the students were asked to contribute to a description of the Professional Year Program by reporting lessons they had taught. Thirty-one students reported activities they planned and directed. The number of activities reported by an individual ranged from 5 to 21; the mean number of activities was 12.5. The "activity" described included such items as a two-week sequence of LEA lessons, a sequence of learning centers on map skills, and a science demonstration for a group of five pupils, repeated until every pupil had seen it.

The combined reports describe a substantial amount of instructional activity in the elementary classrooms to which the students were assigned. While the model for some of these activities was the on-going classroom program, the source of most of the activities could be traced to suggestions, recommendations, and requirements of the professional courses.

Reactions of Students to Classroom Experiences

Shortly after the middle of the semester, the students were asked to write an unsigned assessment of their experiences in the Professional Year Program. It was suggested that they use three questions as a structure for the statement. These were the questions: What is your reaction to the total program? What are the outstanding good features of the program? What are the not-so-good features of the program? During the week following this request, 18 papers were submitted.

The students mentioned 32 "good features." Of this total list, 24 items were directly related to their classroom experiences. Ten students identified in various terms the opportunity to become familiar with the reality of the classroom and the children. Seven reported that they had gained confidence through their work with different children. Two mentioned the value of observing the results of the utilization of materials or activities they had planned. Two students noted the help given by the teacher as they were working with children.

Seven of 22 items in the "Not-so-good" category were directly related to the classroom experience. Three students reported that they were treated more as aides than as students learning to teach. Two objected to the restriction to one classroom for the entire semester. One student found that the teacher provided too much responsibility and not enough help. Another thought that the opportunities provided in the classroom were too limited.

Of the 18 students who submitted these written statements, one

could not make a judgment about the total program "at this time," one identified substantial changes which were needed in the program, and two considered the program "worthwhile" and in need of change. The other 14 expressed a favorable reaction, using such terms as "successful," "running well," "beneficial and productive," and "fantastic." This favorable balance was expressed again at the end of final examination week when 30 students met with the instructors and college administrators for an open evaluation of the program.

Since this program made extensive use of school experiences during this first semester, it would be expected that the students' opinions about the classroom assignments would be similar to their opinion of the total program. The agreement reported above indicates an internal consistency which increases confidence in the data themselves. The total atmosphere and statements made at the open evaluation meeting would support the assumption that the 18 students who returned the written evaluation at mid-semester were reasonably representative of the total group in terms of their reaction to components of the program.

Supervision of Field Experiences

A few generalizations may be made on the basis of this evidence obtained during the first semester of the Professional Year Program. A large majority of students favored a relatively extensive amount of participation in elementary classrooms prior to student teaching. They also reported the planning and directing of activities in all curricular areas as a part of this participation. The students

reported their putting into practice recommendations made by instructors of professional courses. (Additional evidence supporting these claims was observed by course instructors and the center coordinator.)

The observed or reported behaviors of these students as they worked in elementary classrooms represent evidence of the impact of the professional courses on the students. These same behaviors might constitute the core of stated goals for professional courses, goals which have been solicited by college administrators but not formulated as yet.

Two considerations point to one problem which has not been resolved. Too many data in this paper consist of "reports" of untrained, interested students. These data are suspect. These "suspect" reports indicate great variability in the nature of the activities in classrooms, confusion concerning the role of the student and specific shortcomings of a given field assignment. The unresolved problem is the providing of expert coordination-supervision of these field experiences.

In the Professional Year Program, two inadequate solutions to the problem were explored. College Park faculty members spent time visiting classrooms in the several schools, observing students, conferring with teachers and giving the students an oral or written reaction to the activity observed. Unfortunately, the sheer pressure of numbers and the priority of campus schedules seriously limited the effectiveness of this effort. The center coordinator visited and conferred extensively, but his prime responsibility to student

teaching and other center activities limited his impact.

With modification, either of these solutions could provide satisfactory coordination-supervision. A campus teaching team could assume this function if the team were given a long-term assignment to a given group of schools, if their total schedules were planned to free the necessary time blocks, and if at least one member of the team became a "resident" of the schools in the area. These stipulations seem so far removed from current practices as to be unrealistic.

Less radical modification of the role of the teacher education center coordinator would permit him to assume this function. The center would focus its attention on providing field experiences for students in relationship to professional courses in which they were working. These classroom assignments would be the first to be made, orientation for them would be scheduled first, and planning possible changes at mid-semester would call for the exercise of the coordinator's great artistry. Placement of student teachers would be made on the basis of "space available;" some would be assigned to neighboring schools if the center lacked rooms. The student teachers would not be lost or ignored. Their professional preparation and maturity, combined with their acquaintance with the coordinator and the schools, would enable them to work effectively with less direct contact with the coordinator.

It is evident that other solutions may be developed, some of them more effective and less costly. It is the position of this paper that realization of the value of field experiences in teacher

education will require a greater cost than the transfer of hours scheduled for campus classrooms. In addition to the extensive effort required to develop classroom assignments and facilitate optimal use of these, the inclusion of more extensive field experiences requires substantial change in professional courses which become oriented to "next week" instead of "next semester." This greater expenditure may result in long-run saving: prompt, accurate reports from the field might enable an instructor to identify those instructional activities which led to the desired behavior on the part of the college student in the elementary classroom, and the instructional activity (singular) which had minimal observable impact.

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Grimes, K., Priest, L., & Brigham, B. Reactions to a structural change in a student teaching program. In J. D. Bowman (Ed.), *Implementing theory and research in reading.* Position Papers in Reading, University of Maryland Reading Center, 1972, pp. 23-43.

Reactions to Dr. O'Neill's Paper

1. With substantial preparation during the first semester of the Professional Year Program, perhaps 16 weeks is too long for student teaching. Even within a shortened student teaching semester, a variety of experiences should be provided.

2. Effectiveness of a program is largely determined by a clear perception of roles. The P.Y.P. students need to have a sense of purpose and direction as they enter into classroom situations; teachers in the Teacher Education Centers need to be clearly informed of the functions of their role in aiding P.Y.P. students.

3. The Professional Year Program is to be commended since it provides quality field experience and in so doing, aids students in deciding if teaching is their desired profession. This program also bridges the gap between theory of methods courses and practice in the school. Surprisingly, the program causes students to request more methods courses rather than fewer ones because they see the need for additional educational training.

INDUSTRIAL ARTS AS AN IMPORTANT INFLUENCE IN THE QUEST FOR READING IMPROVEMENT

Donald Maley

Reading improvement is a goal that may be shared by many different teachers in the broad school program. Traditionally and normally such an objective has been the prerogative of teachers of reading, as well as the social studies teachers to a certain degree.

The position of this writer is that Industrial Arts teachers can in fact play a *central role* in the improvement of reading for many youngsters whom the school has identified as being "poor" or so-called "non-readers." This posture for Industrial Arts has certain qualifications and certainly does not apply to all instruction labeled as Industrial Arts.

Two of these very important qualifications are as follows: (1) The primary goal of education in these United States was set forth in the Declaration of Independence in 1776, and re-emphasized again in the publication *Goals for Americans*. This goal was and is "self-fulfillment" and the teacher of Industrial Arts that places "self-fulfillment" at the top of his list of goals ahead of tin cups, cookie cutters, breadboards, bookends, soldered joints, squared

surfaces, and smooth finishes is likely to qualify for the role postulated in this paper. (2) The process by which the youngster gets his answers and the degree to which the teacher encourages *reading* as *a process* by which the individual gets his answers is a second major qualifier associated with the proposition.

It seems obviously clear that if self-fulfillment is the ultimate goal, then the very important factor of *being able to read* in this society is one that the Industrial Arts teacher would share with unusual advantage for many youngsters. The advantage that I refer to is integrally related to the nature of the content, equipment, and materials of the Industrial Arts laboratory. All young people are not "turned on" by the usual reading materials found in our communications and social studies classes, simply because all young people are not "turned on" by the same things, ideas, or subjects.

As an example, a recent visit to the Industrial Arts laboratory at the Earle B. Wood Junior High School (Montgomery County) gave this writer an opportunity to listen to a "non-reader" read a five-page written report that he had put together on the development of the Wright Brothers aircraft. This was a part of the class requirement and the process was greatly facilitated by the instructor assisting the librarian in getting a good supply of multi-level reading material on the many topical headings *selected by the students* for study. The requirements for this student were not just a written report, but also included the necessary sketches to construct a model of the plane, and ultimately a plane model was made from the

plans by the student.

The central pedagogical ingredients of this exposure were: (1) The student selected his own topic. (2) The topic was of interest to the student. (3) The student was encouraged to seek his answers from books and other sources and not to get them from the teacher. (4) A good supply of reference materials at all reading levels was available. (5) *The act of reading and writing the report lead to something of vital importance to the student.* (6) The student was rewarded for his reading efforts as well as for writing the report. (7) The report was actually read to the class by the student.

Another excellent example of non-readers reading was found in an automotives laboratory in a vocational program on the lower Eastern Shore of Maryland. Here we found up-to-date automotive manuals showing evidence of extensive use. The instructional procedures in this class required fine and accurate reading, for it was here where the information relating to fits, tolerances, adjustments, parts replacement, and installation was found.

The brand of "non-reader" did not seem to fit many of those so-identified, yet in the other areas of the school, the brand they bear appears to be appropriate. But, I would like to remind you that in those areas of the school where the brand of "non-reader" did not fit, and in the other areas of the school where it did fit, *the variable was not the individual. It was the system*, the process of education, the content, and the philosophical base that tended to be different in each case.

Self-fulfillment for the aspiring auto mechanic can be greatly

contributed to when that individual develops his reading ability, and the teacher must recognize that the encouragement in reading is equally or more important than the student's ability to use a wrench, file a surface, or fill the radiator. The thousands of changes made annually in our cars demand reading capability, or the mechanic may actually go out of effectiveness as the cars on which he was trained go out of style. This is a fact of life that practically every aspiring auto mechanic understands and as a consequence, reading the manuals is seen by him as a need if he is to survive.

My second qualification for the Industrial Arts program that would play a central role in the development of reading abilities was related to the process by which the youngster gets his answers.

One of the finest motivators related to involvement in reading is "the need to know" on the part of the student. The rich environment of the Industrial Arts laboratory, as well as the endless range of potential content and experiences provides opportunities for "need to know" circumstances at all levels of ability.

The extent to which the "need to know" functions as a factor in the attainment of improved reading is dependent upon the teacher and how he sees his role in the instructional process. If the teacher sees himself as the "universal information bureau" with a quick and ready answer for all student problems, inquiries, and questions, the mission is pretty well scuttled before it gets started.

However, if *the process* by which *the student* gets his answers is important and the student is encouraged in this direction, there is a great deal of hope for the mission of increased and improved

reading. The experiences of many teachers using the Maryland Plan for Industrial Arts have amply testified to this point. This particular plan for teaching Industrial Arts has consistently emphasized the importance of the process by which the student gets his answers. Reading has been emphasized and greatly abetted by the compilation of a comprehensive listing of books, pamphlets, and brochures associated with the broad areas of study selected by the students.

These are books that we (the developers of the program) have observed youngsters reading outside of school and the usual academia. This list has been enlarged by the cooperative efforts of school and public librarians, industrial arts teachers out in the field, and by suggestions from observers of the program.

The essential ingredients for reading as a process by which the student gets his answers is thus enhanced by: (1) the "need to know" on the part of the student; (2) the fact that the student is encouraged to seek his own answers and information; and (3) the availability of extensive collections and literature at all levels of reading ability for him or her to use.

It is important to note that the reading done by the student has a purpose and the *information gained is applied* in the pursuit of his developmental or constructional projects. The act of reading takes on new dimensions of importance and relevance to the student when he sees it as a means to his ends.

A similar and closely related activity that has the same connotation is that which involves letter writing as carried on as an

activity in other parts of the school as opposed to letter writing carried out in the Industrial Arts laboratory. Many students have remarked that they never actually learned how to write a letter until they got into Industrial Arts, where the letters they wrote had to actually get an information or material return. It was an activity that required a kind of performance that would get a return. Incidentally, a great deal of letter writing for information, data, and materials is carried on as a process of involvement for the student in getting *his* answers, in the Maryland Plan for Industrial Arts.

Finally, and in summary, the Maryland Plan for Industrial Arts has been developed around the concept of "self-fulfillment" and has placed prime importance on the reading activity as an integral part of the process by which such a goal is possible in this society.

The reading effort associated with this program grows out of a "need to read" stimulated by a "need to know." Furthermore, the reading has a purpose, and the information attained is applied in ways and functions directly related to the student's goals.

The "need to read" is enhanced by the role of the teacher that encourages reading and is directly opposite from the "universal information bureau" kind of an instructor.

The teacher education classes in the Industrial Education Department at the University of Maryland which deal with the Maryland Plan for Industrial Arts have emphasized the points and issues contained in this presentation. Literature and films supporting the

emphases of this direction in Industrial Arts are available through the Department.

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Goals for Americans. The Report of the President's Commission on National Goals. Englewood Cliffs, N. J.: Prentice-Hall, 1960.

Reactions to Dr. Maley's Paper

1. To establish a program like that suggested in Dr. Maley's paper, it may be beneficial to start with workshops for a small group of interested teachers. The teachers in this group could then become resources for other teachers who become interested.

2. The success of this type of program would largely depend on both the relationship existing within a teacher-librarian team and the support of the principal.

3. Teachers of the various school subjects should be viewed as teachers of reading, and their pre-service and in-service training should include some emphasis on the development of reading skills in students.

4. A solution to the many reading problems existing within the schools might be best served by an interdisciplinary approach whereby educators in a variety of subject areas seek solutions together. A multi-disciplinary approach is appropriate not only to reading problems but to other educational problems as well.

STAFFING THE PRESCHOOLER--
THEME AND VARIATIONS

Kathleen Amershek

The current public interest in what pre-school children do with their days has not focused enough concern on the most potent component of the day--the adults who interact with them. Recent research has underscored the impact of the teacher on the child's chances for optimal development outside the school. It is the position of this paper that the same requirements of professional competence should be applied to any adult who assumes responsibility for part of a child's day outside of his home. The need for a professionally competent person to support his growth toward satisfying adulthood is the underlying theme of defensible programs for young children. Variations of requirements by specific programs must remain variations of the main theme, not radical departures from it. Programs in Day Care Centers, hospitals, community recreation centers, therapeutic agencies and the like, cannot be exempt from the basic demand of a staff with professional expertise in working with children.

The definition of professional competence for those engaged in pre-school care has been a difficult task. Writing on the subject

prior to the advent of federally funded programs such as headstart was restricted to educational programs and preparation of teachers for them (Sear & Dowley, 1963). Guidelines for the preparation programs were based on judgments and opinions of experts while research data was minimal. What data were available, emphasized the importance of the behavior of the teacher as the producer of behavior style of the children (Anderson, 1939). Teacher preparation programs emphasized the need for caring about children's needs and development, but little was available to indicate how this was to be achieved by those labeled professionally competent. The 1960's have produced much more helpful information of the needed behavior in adults which are helpful to children (Butler, 1970, pp. 87-97; Evans, 1971, pp. 305-31). Abundant documentation is available on at least four characteristics which could well form the minimal basis for a professional staffer in any early childhood program: (1) the need for recent and thorough knowledge of child development; (2) the need for a stable personality which is capable of giving and receiving affection; (3) the need for intellectual competencies of growth and flexibility; and (4) the need for the ability to work with other adults in caring for children.

Competency in the basic knowledge of child development is the most easily established of the four. Colleges have long offered abundant opportunities for this and claimed to base their programs on it. While simple logic would argue for the existence of such knowledge, the proliferation of experiences based on one piece of behavior, such as quantitative relationships, observation

processing skills, or oral repetition is ample negative proof that many claiming professional expertise in young children are indeed lacking it.

Personality characteristics are one of the thorniest issues of the preparation program. There is such consistency in the data on the positive impact of the warm, stable, accepting personality on children that it no longer can be avoided. Competency will have to include an assessment of the worker's ability to project warmth and affection to the children and to accept the whole range of human emotion from them. The determination of this dimension is of equal value to the others and far surpasses the now standard tuberculin-free, criminal record-free assessments.

Intellectual competence is most needed in the area of philosophy and attitude. The needs of children from a pluralistic society such as ours cannot be met by any one philosophy of being or value system. That person who works with children must be capable of a flexibility in thinking which will incorporate new ideas and evaluate them in terms of his own behavior. A static, solidified adult intellect is a handicap to a child who is seeking the integration of his home world and the world outside his home.

Closely tied to this is the interdependency of an adult's action on any one child. The need for working with others in any of the three relationships--superordinate, coordinate, or subordinate--is the key to implementing the impact of the first three competencies. With the exception of his parents, the child sees all other adults as equally important in his life and takes what is offered

from each. Dissonance is as perceptible to him as harmony and he is as affected by one as by the other.

These four things provide the theme--variation is determined by the particular programs. This writer sees no compelling reason for any of the programs she knows of to depart radically from the theme. The variations seem an elaboration of one or another of the components.

For instance, the programs established for hospitalized childrer simply expand the demands for working more closely and productively with other adults who have responsibility for a specialized part of the child's life. The child needs someone who can integrate the health demands of his hospitalization into all the other parts of his continuous growth and to do so from his point of view. The medical personnel have focused on only one part of him, quite often to the detriment of the other on-going facets of his development. A professional child care staffer is needed to prevent this negative possibility.

The proliferation of day care centers has resulted in staff demands for people who can "stand the kids" for extended periods of time. These programs need staff who are capable of providing a productive interaction with children over time in terms of the child's growth. This seems to argue for stable personality organization with higher energy levels than programs of shorter contact hours with children. There is no indication that less of the other basic competencies is acceptable. A recent study of the staffing interactions in a statewide system supports this conclusion (Prescott &

Jones, 1972, pp. 3-30).

The social service workers in varied community programs for recreation and/or care provide invaluable experiences in cross-cultural understanding and socialization. Their contributions to the child's world is enhanced if they can integrate their extensive intellectual knowledge into the child's total growth pattern and thus really prevent the distorted development of the children.

It seems a reasonable conclusion that the many and varied programs for young children currently available are in need of the same staff--one that could well be called professionally competent. The variations are easily identifiable by the specific focus of the program, but none seem to be defensible without the basic theme of progressional competence. The selection of the staff is the prime ingredient in the determination of the quality of a program offered for young children. It would seem that the licensing requirements for any of these programs should be premised on this base. To the best of the writer's knowledge, the regulations governing programs outside schools are not considering the competence of the staff to deal with children on a very realistic level. In view of the availability of research on this area, the limitations on who may assume a legal responsibility for influencing a child's growth in our society needs a serious look. The current prejudice against professional early childhood workers being involved in staffing the programs for young children because their preparation has been extensive and therefore made their services expensive must be turned around to become the base line for requirements to fill these positions. There

is no defensible way to do otherwise.

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Reactions to Dr. Amershek's Paper

1. The use of standardized tests to measure professional competence especially of the personality test variety can be extremely misleading. People from the community who would make excellent personnel to work with pre-schoolers may be penalized on such tests, while college students who have over the years become test-wise may obtain spuriously high scores.

2. Although undesirable characteristics of pre-school staff members have been easily identified, desirable characteristics have been somewhat more elusive. Traits of competent staff members need to be researched. Research of a longitudinal nature is also needed to yield information about the effects of adults on children over a long period of time.

3. Currently, educators have two means of improving existing pre-school conditions. They can actively support action to obtain legal restrictions on centers for pre-school youngsters, and they can also inform the public of present pre-school situations.

SOME INSIGHTS INTO LEARNING STYLES OF THE "EDUCATIONALLY DISADVANTAGED"

Walter N. Gantt

Isn't it about time that the focus of the term "disadvantaged learner" shift from the child to his educational setting where it rightfully belongs? As of now, the disadvantaged are viewed typically as those children of the poor who have not been able to benefit from the instructional procedures, materials, and formal language commonly provided in schools. The problem which is being focused upon is the ever widening gap which is evident between these children and their schools despite the compensatory financial efforts of a concerned society.

Much has been written about differential learning styles of children and how they should affect teaching procedures. Increasingly, too, there is an awareness that in the interaction of children and teachers language strategies can be identified which will help children express themselves more thoughtfully (Gantt, 1970). The potential effects of these two ideas upon the learning of children are in need of critical study and evaluation.

The Question of Learning Styles

What is meant by learning style? A description of disadvantaged children is found in a 1968 government publication called *Low Income Life Styles*. There is less abstraction, fewer concepts, and a minimum of discursiveness among the low-income group, the authors report. Ideals of obedience, politeness, neatness, order, discipline, and cleanliness are stressed more by the lower classes than by the middle and upper class groups. These behaviors are noted in their attitudes toward learning and in their value systems. Martin Deutsch (1965, p. 56) points out that children of the poor have difficulty attending to long, orderly, verbal sequences. Since this is the primary means of teaching and disciplining--through discursive methods--they are frequently at a disadvantage in the schools.

Another Point of View

The preceding authors espouse the point of view that there is a language and a learning style which frequently attend the socio-economic level of an individual. There is another point of view, however, that indicates that all people are unique; that there is a range of behavior which is characteristic of any group of individuals, depending upon the variety, complexity, and impact of their experiences. This point of view is enunciated by Robert Strom who reports that "children differ in their preference of learning styles (1965, p. 78)." Some maintain a distinct pattern of response; others change according to their perception of the demands of the school.

A report on the recommendations of a monumental task force on teaching disadvantaged youth has been prepared under the leadership of B. Othanel Smith. Called *Teachers for the Real World*, he makes this comment in it:

> The problem of preparing teachers adequately for the disadvantaged is the same as preparing teachers adequately for all children. We do not need special teachers for the children of different ethnic and social groups. Rather we need teachers who are able to work effectively with children regardless of race or social situation, but mindful of what that is in each case (Smith, 1969, p. 12).

The foregoing excerpt establishes the central thrust of this article. This position advocates an acceptance of children as children whose needs differ only in degree rather than in kind.

What the School Can Do

What are some specific educational accommodations recommended for the problems which are emerging from the review of the literature? Two problems appear in the forefront of concern. How may the teacher relate to the variant learning styles on an individualized basis? What kind of school setting facilitates the expansion of the child's language resources? These two problems are interrelated and optimally are approached within the same framework. Harry Passow (1967, p. 353) suggests that rather than rely primarily upon administrative arrangements *per se*, such as remedial and tutorial programs, team teaching, learning centers, and pre-service and in-service teacher training, we should attend very carefully to the curriculum--content, method, and learning environment and the concomitant interactions which occur between teacher and child.

Implications

The implications for teaching, curriculum, and learning are apparent. These may best be summarized in a direct quotation from Landsdown's article.

> The solution of providing opportunities for lively learning for the inner city child is not giving him more of what has not been effective before; it is not thinking of him as having a special (and largely unknown) learning style; it is not keeping him at the experimental concrete level. The solution as I see it is changing our approach to teaching so that real learning can take place. It means providing meaningful (to the child) concrete experiences which he can explore in his own way; it means listening to him tell of his experiences in his own language clarified through interchange with his peers . . . (Landsdown, 1969, p. 35).

The direction is clearly one of continuing to move toward dispelling any rigidity of thinking about the language and learning styles brought into a particular situation by a given group of children. If their learning difficulties are perceived as the school's challenge, rather than its burden, the label "disadvantaged" may soon be relegated to the obsolescence for which it is long overdue.

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Reactions to Dr. Gantt's Paper

1. The term "disadvantaged" has been misused in many educational settings. The term has often been used to label children who are viewed as deviant or behaving outside the boundries of normal expectation. Unfortunately, it often connotes a deficiency in the child rather than a deficiency in the child's educational situation.

2. Educationally disadvantaged students are not exclusive to the inner-city. They can be suburban elementary and secondary school students or university students who are in less than optimal educational environments.

3. Teachers in the inner-city do not have to be a special breed of teacher, nor does there have to be special preparation programs for teachers of inner-city children. Rather, these teachers need to be keen students of learning who are perceptive of children's needs, who understand a variety of value structures, and who have an attitude that establishes a tone for effective teacher-pupil interaction.

FOR KINDERGARTENERS WHO HAVE ACCOMPLISHED SOMETHING: SIX URGENT TASKS FOR TEACHERS

Portia C. Shields

Deprivation of the basic needs of a child's life, food, shelter, love, and affection, and security cause interminable hardships while he is young and handicap him as an adult. In addition, a child needs a feeling of self-respect and satisfaction that comes from achievement. If this achievement is not recognized, there is a danger of a lack of inspiration and motivation for future effort If he suspects that he is unwanted, he feels useless and unworthy. Each child needs the knowledge that he is liked for himself and that the acceptance is not dependent upon whether or not he is able to fit preconceived expectations of others.

Unfortunately, for many kindergarten teachers and their administrators, children are coming to kindergarten with one, two, and three years of nursery or pre-kindergarten experience. They have been looked upon as burdens and the solution has usually been to (1) ignore their individuality, (2) send them to grade one for activities, or (3) promote them to the next grade. All three solutions

to me, can have a devastating effect on the child who presents himself as one who feels he has accomplished something.

It is the purpose of this paper to review some of the existing attitudes towards these children, to discuss briefly the "readiness" aspect of kindergarten, and to present six tasks I call urgent for a more realistic approach to their kindergarten experiences.

An Opposing View

The proper time to begin reading instruction has been the leading question in our schools for years. Since most laws in the United States require six years as the age children must be enrolled in public schools, most educators paralleled reading instruction to that time. The research (Morphett & Washburn, 1931) showed that a mental age of 6.5 was required for beginning reading instruction. Piaget (cited in Raven & Salver, 1971, p. 630) said that children's need for individual attention rendered them unable to "operate" with the reading process until they are about seven years. In 1908, John Dewey (cited in Durkin, 1970, p. 19) was quoted as recommending age eight as an appropriate time for beginning reading instruction.

The work of Arnold Gesell and his followers (cited in Durkin, 1970, p. 21) explained that there were certain developmental stages through which a child must pass and his ability to learn to read was associated with a certain "neural ripening" which unfolded during one of these stages.

"Readiness" for Reading

These developmental stages had a major influence on the "readiness" aspect and instruments were devised to judge a child "ready" or "not yet ready," and teachers were advised to delay reading instruction until the mental age (6.5) was reached. Ophthalmologists at that time wrote that children below the age of five could not see well enough to read. Vernon (1958) concluded that children below the age of five were not able to receive and remember small details of shapes well, nor was their auditory discrimination adequately developed. These were two factors that were necessary before a child could learn to read.

Arthur Gates (1934) conducted studies that suggested that beginning reading wasn't entirely dependent upon the nature of the child himself, but more important was the kind of instruction used.

Readiness programs were initiated because we were assured that teachers could get children "ready." Kindergarten was the place and it was assumed that all children who came needed to participate in the full program. Essentially, it included:

Vocabulary Development
Visual Discrimination
Auditory Discrimination
Left to Right Eye and Hand Movement
Activities for Muscle Development
Story Interest

Children who went through this kindergarten program and were judged "not yet ready" either repeated the kindergarten or, in some areas, were placed in the Junior Primary which also counted

as a grade failed.

Proponents

Bruner (1961) began to stress the structure of discipline in teaching. Hunt (1961) focused on experience to affect readiness, and Bloom (1964) proclaimed that the first five years were the most crucial in a child's early life because it was the most rapid period for intellectual development. One ophthalmologist wrote that children's eyes were efficient enough for reading by 12 months. Holmes (1968) found little experimental evidence of changes in children's eyes between the ages of two and five with or without instruction.

Programs appeared on the market some of which claimed parents could "start" children to read as early as six months if they bought the "How To Teach Your Baby To Read" program.

Headstart sprang up for the "so-called" disadvantaged. Montessori was revived for the middle class and the race was on. "Why wait?" was the cry. Moore (1959) came out with computerized typewriters that produced early readers and television captivated children daily with programs aimed at making youngsters ready to read. McKee and Brzeinski (1966) reported on their Denver Project. Though they avoided *pushing* children, they were able to teach large numbers of typical kindergarteners to read. Their longitudinal study followed the children through fifth grade and found that the greatest gains were made by children who were taught to read in kindergarten and whose instructional program was adjusted to that

strength from grade to grade. Their teaching activities included the following:

Spoken Context
Initial Consonants
Forms of Letters
Context and Initial Consonant Sounds
Sounds and Forms of Letters
Context and Displayed Initial Letter
Context and Displayed Word

Many other studies (Durkin, 1968) showed that reading is in fact being taught to children younger than 6.5. Rather than have children do readiness activities again in Junior Primary, public education shifted its focus to public pre-kindergarten.

The Opposition Speaks Again

Opponents to this practice ask: "Why should they read earlier?" "Why can't they play longer?" Hymes (1968, p. 155) asked, "Do childhood experiences actually speed up maturation? Does it in any way change the basic needs and style of a five year old?" Ames (1966) contended that *delay* in reading instruction would be a preventative measure in avoiding nearly all reading failure.

Hymes (1970) and Sheldon (1962), after visiting many kindergartens where reading was taught, said that the atmosphere was a serious, no-nonsense one with silent, passive, pencil pushing activities. Moore and Moore (1972) proposed that the best teachers are parents and feel that children don't need school until they are eight years old. Instead of school, they have devised "Home Start," intended to redirect the aid of early childhood education from the school to the home.

The Emphasis--Choosing Sides

We, as professionals, have been busy deciding to which camp we'll belong, the head or the late start. Educators, psychologists, education specialists, optometrists, and social scientists have bombarded parents and teachers with their opinions. These opposing views have left some of us confused and these children often neglected. I propose we look at the reality of the situation.

Some parents are pondering and waiting but many have decided. Each year more and more children are receiving pre-school experiences for one reason or another. They are presenting themselves as ones who feel they have accomplished something. They have individual strengths and they are curious. Yet, one survey (Laconte, 1970) of 500 teachers found that many teachers believed that the few children who are ready to read, comprise so small a minority that it is not worth revising the whole kindergarten program. That such a lack of imagination exists throughout our kindergarten programs is indefensible. The latest figures yet posted at the Census Bureau show that we're talking about over 2,500,000 youngsters in regular nursery schools. This figure does not approach the numbers in day care centers and play groups.

Six Urgent Tasks

I think we need to re-evaluate our thinking about the kindergarten waiting for these children. We need to develop effective teaching strategies for the "readiness" that is present in the

children who present themselves. I don't mean that teachers of kindergarten should become simply teachers of first grade. Surely, we can be more creative than that. And I don't feel that the entire kindergarten program need be changed. We need to concentrate on several tasks for our existing kindergarten programs and make the appropriate changes or inclusions that are indicated. Consider the following, which, I call six urgent tasks:

Finding a Method for Determining the Individual Competencies of Those Who Present Themselves

We don't need to *test* these children in any formal sense. Reading to them and leaving out a word, sound, phrase, etc., gives us an idea of their contextual application and phonetic skills. Good questioning can give us many clues. Being good listeners will afford us much information. If we don't separate the language experiences (listening, reading, writing, and speaking) from the context we teach, we can assess competencies more adequately.

Providing Creative Experiences for Expressing Their Competencies

We should not be afraid to give them a pencil. Let's see what they can do. Anything they scribble or write gives them an experience of worth. Let's let them make their own books and label or name what's in them. If they know the alphabet, they can make their own dictionaries. Let them tell us a story. See how imaginative [illegible]an be.

Creating an Atmosphere of Appreciation of Each Individual

Let's allow children to initiate activities and give them a feeling of personal involvement. Listen to them and prize them

without putting on a facade. They'll see right through it.

Individualizing Instruction as Much as Possible

If a child can read, let him read to you. If he wants you to help him spell a word, do it. If he asks you to make a letter for him, make it. Provide him with realistic learning activities that are reinforcing and express *him*. Give each child a few minutes of his own personal time as he moves around to interact with and manipulate his environment.

Including the Parents

The kindergarten year is most important for parents, too. They want to help. They are eager to come and see what we're doing. Keeping them in the dark causes many parents to be anxious. Let's tell them what we're doing and how we're doing it. They can help us individualize by volunteering. The children can see parents and teachers cooperating. Get the fathers in too.

Training the Teachers

Most kindergarten teachers want to give the children what they need. They need to know how to start with the child's capabilities and go from there. What is called for are workshops for meaningful dialogue and exchange of ideas. Resource people should be supportive and anxious to help with the specifics.

Summary

A five year old child cannot be penalized for "knowing" more than we expect of a kindergartener. Regardless of how we view

beginning reading instruction, where or how to begin, children are coming to kindergarten with some skills we had anticipated teaching them. They have every right to expect a knowledgeable teacher; a creative, secure environment; and a fulfillment of their individual abilities.

Much research is being carried on to find out which set of abilities in children makes which approach to reading instruction best. If we find these answers, perhaps the advocates and the opponents will come closer to an agreement. Maybe the entire kindergarten program will have to be reorganized. I don't know. I know that these children have had previous learning experiences that cannot realistically be ignored. Rather, we must consider these tasks, and more, and improve upon them. Then, let us develop teaching strategies from them that will take into account the capabilities and talents of each child and will create a climate for his self-fulfillment.

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Reactions to Mrs. Shields' Paper

1. For too long, kindergarten has been viewed as a separate entity from the other grade levels. There appeared to be little or no need to individualize instruction in the kindergarten. However, quite to the contrary, there should be provisions made for individual children.

2. The issue of reading in the kindergarten is not an either-or question but rather is a decision to be made based on the strengths of individual children. Even then, reading experiences for kindergarteners should not be simply those of a first-grade program provided a year earlier. Reading for five-year-olds is not necessarily the same as reading for six-year-olds.

3. Reading, then, is not a major goal of the kindergarten, but rather is just one available opportunity within a much broader language environment. There is a need in the field of education for a more careful delineation of what experiences would characterize a broad language environment.

4. Just as reading can be one facet of language development, language development can be viewed as one facet of an even larger program in which provisions are made for a child's social, emotional, physical, as well as cognitive growth. As objectives are determined, an important consideration is what is good for five-year-olds at the present time rather than how we can prepare them for what is coming next year.

5. Kindergarten teachers, like other teachers in the educational system, require sufficient planning time, support from administrators and the community, and in-service opportunities.

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TEACH READING IN READING SITUATIONS

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MaryAnne Hall
Jerilyn K. Ribovich

"Of course! How else?" you might respond to the title. We contend that much reading instruction occurs in situations which are nonreading ones--ones in which minimal or no communication occurs. Our position is that since reading is communication through written language and since communication is the heart of the reading process and the purpose for which reading is done, the teaching of reading should occur in communication situations. Numerous existing practices used in the teaching of reading need to be altered to be congruent with reading as communication. Our purpose here is to present a rationale for teaching reading in communication situations, to examine selected teaching practices, and to present suggestions for altering such practices in order to teach reading in reading situations.

The rationale for offering reading instruction in reading situations with the focus on language processing for communication is based on a view that the act of reading must result in the transmission of a message from an author to a reader. Reading may be defined

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as the reconstruction of a message from print (Goodman, 1968, p. 15) and the processing of information (Wardhaugh, 1969, p. 52). We believe that reading situations which help learners to reconstruct messages from print should be the core of reading instruction. We believe, too, that the teaching of reading should occur in situations where the teaching is related to the tasks a reader must employ in realistic reading situations.

The aim of reading instruction should be to equip children with the strategies needed to process written language to arrive at meaning. Early emphasis on words, letters, and sounds rather than on meaningful language seems unjustifiable since such practices deprive the reader from using all the cue systems available to him when reading sentences and paragraphs. A reader must be able to use semantic and syntactic information available in context along with grapho-phonic cues, but isolated word study does not permit use of integrated language processing of all the cues of language. Isolated word and letter study is not communication, and emphasis on fragmented language leads to a gross neglect of other language cues that cannot be taught in isolation from language context. Only in context can readers use syntactical information, and only in context can readers develop sentence sense. Only in context can readers use the intonational system of language as they translate print into speech. Finally, only in context can a reader associate the appropriate meaning to certain words since that meaning is determined by use in a particular context.

What constitutes a unit of meaning in the language has lead to

considerable discussion. Lefevre (1964) asserts that the minimal unit bearing pattern of the language is the sentence and that the basic fault in poor reading is poor sentence sense. Goodman (1969) claims that children learning to read should see words as units of larger, meaningful units. He also says that ". . . language--not words or morphemes--in its ordered flow is the medium of communication" (1969, p. 28). A disproportionate amount of reading instruction deals with isolated letters and words with neglect of the sentence and the larger units of paragraphs and total selections as the carriers of information.

Isolated language activities revolving around distorted or fragmented pieces of language during beginning reading instruction may give a child a misconception of the purpose of reading. A child who is taught with techniques stressing isolation of language elements may view the purpose of reading as uttering sounds or naming words. The beginner may never view reading as comprehension of a message. The child should be reading meaningful language about comprehensible, relevant content which will serve as the stimuli for thought. He will then realize that reading has a communicative purpose.

Undoubtedly those who teach reading in isolated language situations feel that their strategies will make reading simpler for the child. But do these strategies make reading easier in light of the considerable linguistic ability that the child brings to the reading situation? In learning the oral language code, the child learned the language symbols to conceptualize his environment. He learned

to receive oral language messages that were meaningful units rather than isolated language. Since the child never consciously dealt with individual words, letters, and sounds as he learned the spoken language, an immediate introduction to terminology dealing with words, letters, and sounds provides the child with a set of confusing abstractions. In fact, beginning kindergarten and first grade children do not know the meaning of the terms: *word*, *letter*, or *sound* (Downing, 1969). It is ironic that the presentation of mutilated language to the beginning reader is done in an effort to make reading simple and easy when, in fact, it may only tend to confuse.

Our statements require that we examine some existing practices often employed in teaching reading to determine their purpose and to offer suggestions for practices which can achieve the desired purpose in communication situations. Our contention is that much instructional time is wasted because that time is spent on activities which cannot be called language processing for communication. The bulk of instructional time ought to be spent on letting children read for meaning. Situations where teachers provide children with experiences of uninterrupted reading of meaningful messages are recommended. In helping them to comprehend, many teachers ask children to paraphrase to determine whether they have recovered the meaning contained in the deep structure of the language. But what is the nature of the additional reading activities that children perform? The following is just a sampling of some of the practices designed to develop readiness, vocabulary, and word attack skills found in many elementary classrooms. They are often provided

over-and-above experiences of reading stories or in the case of beginning readers, dictating stories. The additional practices, too, should focus on the communication of meaning which is the very nature of reading.

A Look at Teaching Practices

Teachers who are working with children to develop *readiness* skills for reading often have as their goals the development of left-to-right orientation and visual discrimination. A popular practice is the use of readiness workbook pages with pictures of objects and shapes which children identify as being identical or not identical and which they follow from left to right. Since readers do not read triangles and circles in realistic reading situations, a better practice would involve the use of regular story material. Children can follow from left to right along sentences in their experience stories; they can identify whether words, phrases, and sentences within stories are alike or different. Another readiness goal is the identification of letter names which can take place naturally as children work with visual discrimination using contextual materials. They will also learn that letters make up words which in turn form larger units called sentences.

Throughout the development of reading skills there is an emphasis on the learning of *vocabulary*. A common practice is the introduction of selected new words before the reading of the story wherein they are contained. Generally, the words are those considered to be new and/or difficult and are often presented as a list of

isolated words. The child would have so many more language cues to use if these words were written in sentences.

Following the reading of stories, many teachers provide numerous opportunities for children to practice words. Among the follow-up activities are tachistoscopic devices which expose individual words one at a time in list form, various games involving isolated words such as fish, concentration, and bingo, and drill exercises with word cards. The purpose of providing vocabulary practice can be accomplished with materials that emphasize the purpose of getting meaning while reading. Children can arrange and rearrange phrase and sentence strips containing the practice words to build sentences and paragraphs that convey messages. They can play games in which sentences are matched for being synonymous or opposite in meaning. Cloze-type activities can be used in which children supply missing words in passages to make them meaningful. Sometimes several words can fit in a given blank and children have great fun discussing the reason they chose a particular word and explaining how meaning is slightly altered with various word choices. Some children can even try their hand at rewriting passages so that the opposite message is conveyed.

A much stressed area in reading instruction is *word attack*. One aspect of word attack is the ability to use letter-sound relationships to identify new words. Unfortunately, we have observed it to be quite common for children to be presented with isolated letters and then asked to produce the corresponding speech sounds. The same purpose of developing grapho-phonic skills can be achieved when children are led to analyze letter-sound correspondences with words that

are taken *from context*. To make such instruction useful, it should be applied to attacking new words in context. Another aspect of word attack is the ability to use structural analysis skills. Most children can zip through exercises in which they take a given word stem and then systematically add a series of inflections. Children can better see the purpose of altered word forms in contextual language situations where the syntactical structuring of sentences is an important cueing system. For example, cloze-type activities with affix forms deleted can be used to practice content commonly covered in structural analysis.

Summary

The teaching of reading as communication through the processing of language requires teaching techniques which foster communication. A communication situation cannot be built by using language fragments devoid of meaning. Rather, teaching practices should stress contextual settings so that children can learn those language processing strategies vital to purposeful reading. Reading instruction should center on experiences that facilitate reading for meaning. Even in practice situations, communication can be central. Hopefully, children will ask themselves of all reading material, "Does that make sense?" The answer to that question when applied to some teaching techniques is "No!"

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Reactions to Dr. Hall's and Miss Ribovich's Paper

1. There is a much greater need today to look at the reading process rather than the reading product which has been the traditional focus of attention. One way to learn more about the process is to ask children how they identified certain words or how they arrived at certain conclusions about the content of stories. The process should be exciting to examine in terms of the beginning reader and the mature reader.

2. Several studies have revealed adequate results in achievement stemming from reading approaches that are very heavily phonics-oriented. Often-times, the assessment instruments used in these studies measure word recognition rather than comprehension of contextual material.

3. Viewing reading as only a linguistic process would be a restricted view. The reading process can be characterized as having perceptual, psychological, cognitive, and physiological components. The position in this paper does not deny, for example, the importance of visual perception and visual memory.

4. There is a need for research designed to investigate the values of teaching reading in communication situations.

A CASE FOR A CERTIFIED ELEMENTARY SCHOOL MATHEMATICS SPECIALIST

Robert B. Ashlock

Certification of teachers as reading specialists is common practice. Hiring officials expect persons so certified to have had specialized training and experience which enables them to use a wide range of instructional and evaluative materials. They should be able to help classroom teachers further develop their own skills in teaching reading, and they should be able to plan and implement instructional programs for children who are not satisfactorily served by regular classroom instruction. It is the author's belief that the time has arrived for a similar certification for elementary school mathematics specialists. In the paragraphs which follow, suggested roles for the elementary school mathematics specialist are discussed, needed competencies are suggested, a rationale for certification is presented, and the nature of a program which would prepare certifiable specialists is briefly considered.

Responsibilities of Specialists

The increasing need for elementary school mathematics specialists

results from many factors: open space and ungraded schools, team teaching arrangements, middle schools, mathematics laboratories, and the development of a large quantity of specialized instructional materials--to mention only a few. It is not surprising then, that the actual responsibilities of a specialist vary considerably from one assignment to another. Even so, it is possible to consider the variety of roles a specialist may assume, and list in summary form responsibilities of elementary school mathematics specialists.

Mathematics Laboratories

With the greater use of what is sometimes called "active learning" and the availability of an ever-increasing array of instructional materials, mathematics laboratories have become much more common in both elementary and secondary schools. Mathematics laboratories vary widely in physical characteristics and purpose; however, it is the specialist who bears the major responsibility in developing and managing the laboratory. It is often a room set apart and equipped to serve exclusively as a mathematics laboratory. If so, it is probably "home base" for the specialist who works with groups of children from throughout the school to supplement regular classroom instruction in varied ways. If the laboratory is only a table in each classroom, the specialist works with the teacher, locating and designing instructional materials and helping the teacher initiate more individual and small group independent activity.

Diagnosis and Correction

Classroom teachers need help diagnosing difficulties of children who are not responding satisfactorily to the regular program of instruction. The specialist serves a very important role in this regard as he observes and analyzes a child's mathematical behavior with greater detail than classroom teachers have either training or time to attempt. Sometimes, the elementary mathematics specialist is able to provide needed corrective instruction himself as he works with children individually and in small groups. For example, a group of children of different ages and from different classrooms may come to the Mathematics Laboratory regularly to work with special apparatus, tackling problems carefully selected by the specialist. Frequently, the specialist who has diagnosed a child's difficulties with mathematics works with the classroom teacher planning corrective instruction--even preparing special materials for the child to use in his classroom.

Departmentalized Teaching

Elementary mathematics specialists are sometimes called upon to provide regular classroom instruction in mathematics, especially in schools with a departmentalized organization. Frequently, the specialist's classroom becomes the Mathematics Laboratory and is so equipped. If he is responsible for teaching mathematics to certain grade 4-6 classrooms, he will be able to assist other teachers with diagnosis and corrective instruction only if he is given sufficient

unscheduled time in his daily schedule.

Team Specialist

Similar responsibilities fall to the specialist who is responsible for the teaching of mathematics within a team teaching organization. The setting is frequently an open space school, probably ungraded. Specific responsibilities of an elementary mathematics specialist in such settings vary widely, depending upon the availability of instructional resources and other staff. Not only does the team specialist provide a basic instructional program, but hopefully, he has adequate time and resources to provide laboratory experiences for all children assigned to the team. He also diagnoses the difficulties of individual children and sees that corrective instruction is implemented.

Middle Schools

The mathematics teacher in a middle school shoulders many of the specific responsibilities already discussed. Training as an elementary mathematics specialist enables the middle school teacher to provide laboratory experiences where structured materials are available to help middle school children learn mathematics, and where mathematical applications are stressed. Children who are having difficulty with mathematics at the middle school level critically need careful diagnosis and the instructional flexibility which permits implementation of a program of corrective instruction.

Gifted Children

The elementary mathematics specialist, whatever the instructional setting, is also responsible for extending the horizons of children who are exceptionally gifted in mathematics. Frequently, the Mathematics Laboratory is the setting where, working individually or in small groups, able children wrestle with interesting mathematical applications and extensions beyond the basic program of instruction. Where there is no laboratory, the specialist helps teachers design appropriate activities for gifted children, and arranges for mathematical projects bringing together able children from several classrooms.

Area Specialist

The preceeding paragraphs suggest something of the responsibilities of an elementary mathematics specialist assigned to one or possibly to two buildings. A specialist who is assigned to a larger number of schools usually works more with classroom teachers and less frequently with individual children; however, he often diagnoses a child's difficulties in mathematics and suggests a program of corrective instruction for the classroom teacher. He spends considerable time locating and designing instructional materials for classroom teachers. Demonstration teaching is one way he helps teachers use such materials more effectively. He also works with administrative officials to assure the most effective use of funds designated for instructional materials. Teachers are helped to think through instructional sequences, and in-service sessions are often conducted as part of the school district's

program for in-service teacher education. It is the mathematics specialist who usually coordinates textbook selection activities when mathematics texts are adopted.

Needed Competencies

Having considered the kinds of things an elementary mathematics specialist does, it is appropriate to ask the question: What does a teacher need to know, what does he need to be able to do if he is to serve well as an elementary mathematics specialist? What competencies should the hiring official look for in a prospective specialist?

The author concurs with LeBlanc, who feels the elementary mathematics specialist needs to be competent both as a generalist and as a specialist (1970, p. 606). LeBlanc would like to see a teacher in each building who:

1. Knows enough mathematics to make decisions about programs and organizations;
2. Knows enough about how children learn mathematics to select and design appropriate activities for children;
3. Knows what mathematical aids are available and how they might be used in mathematics labs;
4. Knows enough about tests and measurement in mathematics to design evaluation of mathematical learning;
5. Knows just enough about other subjects so that she could teach those subjects as if she were a generalist.

It is also essential that the specialist know the objectives of contemporary elementary school mathematics programs, know the philosophical and psychological orientation of instructional materials under consideration, and know what assessment devices are already

available in mathematics education for use in classrooms and more specialized settings.

It is reasonable to expect the elementary mathematics specialist to be able to:

1. Help teachers sequence instruction so as not to skip over essential developmental tasks.
2. Work diagnostically with a child, finding what the child can and cannot do, finding what he does correctly and what he does incorrectly, and finding what he does correctly in mature ways and what he does correctly in less mature ways (Wilson, 1967, p. 96).
3. Plan an instructional program for a child who has been diagnosed, and work with the classroom teacher to implement the program.
4. Set up instructional programs that are highly individualized, and help teachers make their existing instructional programs more individualized.
5. Conduct textbook evaluations.
6. Administer a mathematics laboratory.
7. Function satisfactorily as a regular elementary school teacher (i.e., a generalist).

Need for Certification

Depending upon the basis for certification, a professional certificate suggests to a prospective employer that the candidate for a position has had specialized training or that the candidate has demonstrated certain competencies. It is not necessary for the hiring official to personally arrange for a demonstration of each desired competency, for this has already been done, at least in part, by some professional agency. When almost any college graduate could find employment as a teacher because teachers were in short

supply, there was less interest in the training and competence of candidates. Today, with many applications for teaching positions, it is important that there be at hand a professional judgment concerning the professional competencies of the candidate.

In Maryland, an elementary teacher with a bachelor's degree and a total of 18 semester hours of college mathematics can have a rider attached to his certificate identifying him as a "math specialist." An elementary teacher with a master's degree and a total of 24 hours of mathematics at the college level can have a similar rider attached to his certificate. This so-called certification as a specialist has not been sought or used in the past, even by those eligible for it. The reason is obvious. It merely brings attention to the number of hours of mathematics the individual has accumulated on his transcript--courses in analysis, calculus, etc. It says little or nothing concerning the individual's competence in elementary school mathematics *education*.

However, more and more schools are developing mathematics laboratories, the need for diagnostic teaching and specialized help for teachers is increasingly recognized as teachers try to work more with individual children, team teaching is common practice in a variety of settings, and middle schools continue to be staffed. Positions as area specialists are also coming into being as the variety of instructional programs and materials in elementary school mathematics becomes overwhelming. As school hiring officials seek candidates to fill roles such as these, they would be helped immeasurably by certification of elementary school mathematics

specialists who have demonstrated special competencies needed for such roles.

It should also be emphasized that certification as an elementary school mathematics specialist is viewed as special certification *in addition* to regular certification as an elementary school classroom teacher.

Programs for Preparing Specialists

The nature of a teacher education program which would prepare such elementary school mathematics specialists is properly the subject of another paper. However, a few notes on the matter are appropriate here.

Programs designed to help teachers become certified as elementary school mathematics specialists would eventually reflect more diversity and a greater balance than is typical of training programs today. It is assumed that the required training would be offered in programs for a master's degree building on a bachelor's degree for the generalist. Included would be mathematical content, learning theory, and tests and measurement. Further, intensive study of elementary school mathematics research, curriculum, and instructional materials would be essential. Work in a clinic for underachievers and an internship in a mathematics laboratory are also necessary if the individual is to develop the desired competencies.

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Reactions to Dr. Ashlock's Paper

1. The need for certification of a math specialty must be clearly specified if it is to be established. This need becomes less obvious as particular math programs in elementary schools are analyzed because these programs are so diverse. Among the diversity, however, the math specialist can serve the important function of setting up a home-based program.

2. It is entirely possible that certification as a math specialist can be built into a master's program. A possible impediment to establishment of this type of certification may be other state colleges who are not equipped at the present time to certify persons in this area.

ELEMENTARY EDUCATION STUDENTS' IDENTIFICATION OF PRACTICES AND EXEMPLIFIED PRACTICES IN TEACHING SOCIAL STUDIES*

Robert V. Duffey

The elementary school teacher appears to be the last of the general practicioners in education. Typical undergraduate "methods" courses required of teacher-candidates reflect this. One problem associated with preparing students for the generalist's role is the charting of their progress toward the basic goal of becoming operational as classroom teachers. Typically, collegiate credits and grades have been accepted as indicators of readiness and fitness to proceed into student teaching. The position of the writer is that teacher educators (professors of Education) should be working toward finding more specific indicators.

Methods courses often play their roles in the drama of teacher education under a heavy cloak of ambiguity. While one student is taking his course by correspondence, another student in residence,

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*The generous help of Dr. Lloyd B. Hutchings is gratefully acknowledged.

though attending class regularly and passing all the tests, is denied credit because he did not "participate" to the professor's satisfaction. One professor views his methods course as academic in the traditional sense; another teaches his as professional or applied; and another conducts his course as a combination of academic and professional. In some institutions, academic content must precede the course in the teaching of that content; in others, the methods work may be taken in advance of the content it concerns.

Why can such disparity provide an accurate prediction of success? The most likely answer is: Because teachers only succeed. In general, success in student teaching is the fulfillment of a self-fulfilling prophecy. Any procedure can be successfully predictive when in fact only one outcome exists.

The current preference of many teacher educators in this matter is performance-based criteria. There would be no need for further discussion if it were not for the great difficulties in implementing performance-based checkpoints. Especially in larger institutions, the logistics of physical arrangements and professors' time are well nigh insurmountable.

What is needed is an accurate and not unduly cumbersome way of keeping track of large numbers of students as they progress toward becoming competent neophytes in the profession.

This study looked into one aspect of the use of a paper and pencil instrument as a possible solution to the problem in the area of social studies. It seemed reasonable to assume that trying out

such an instrument in social studies would be a stern enough test of the idea to commend it to teacher educators interested in the other curricular areas, which seemed less diffuse and better organized than social studies.

Essentially, the instrument tested student's knowledge of an array of facts, concepts, and generalizations commonly included in the investigator's curriculum and methods course in social studies for elementary school teachers. The knowledge was tested in aided recall items (multiple choice), each fact, concept, or generalization being presented in a statement of recommended practice and in a descriptively worded example of the practice.

Purpose of the Study

The purpose of this study was to determine whether there is a significant difference between undergraduate elementary teacher-candidates' achievement in recognizing written statements of recommended practice in the teaching of social studies and their recognition of examples of those practices. Answers were sought to these general questions:

1. How accurately can students identify generally accepted practices or principles in the methodology of teaching elementary social studies?

2. How accurately can the students identify examples of the practices or principles mentioned in 1 above?

3. How much correspondence is there between the distribution of the students' correct responses to the Practice items and the distribution of their correct responses to the Example items; that is, does the nature of students' responses to Practice items appear similar to the nature of their responses to Example items?

Need for the Study

Answers to these questions might help determine the feasibility of objective, pencil and paper tests as indicators of students' progress, and as the first stage of a two-stage evaluation: (1) a test of recognition of recommended classroom practices; and (2) an instrument for judging the carrying out of the practices in student teaching. If it were shown that teaching practices identified as consequences of course work were also those that were carried out successfully in student teaching, then teacher educators might reduce considerably the logistical problems associated with checking competencies as part of pre-student teaching courses.

It seemed reasonable to assume that recognition would precede implementation of a procedure. But there was a nagging doubt that some students unable to identify a practice described in pedagogical terminology might be able to identify it if it were described situationally. Hence, the set of matching examples in the test.

Procedure

A test of 31 pairs of items was devised. In each pair, one item dealt with a generally recommended practice and one was a descriptive example of the practice. Each pair of items, therefore, contained an expression of an educational abstraction and an expression of the practicioner's possible application of the abstraction. For example:

12. When a committee bogs down in social studies, your first step will be to

A. disband the group for the time being

B. discuss the situation with the chairman

C. remove the trouble maker(s)

D. help the group to clarify its objectives

52. A committee has fallen into bickering and is making no progress. You call the group together and say,

A. "Harry, as chairman you must exert some leadership; and the rest of you must cooperate with Harry."

B. "Boys and girls, let's review just exactly what this committee's job is."

C. "If you folks can't work together, maybe we had better not have this committee."

D. "This committee *can* work. I'll give you one more day to get on the ball."

The 31 Practice items were arranged randomly, and the Example items were matched to them. The two sets were designated I and II respectively, to match the ordering on the answer sheets.

Topics and number of items per topic were as follows: committees, 3; discussion, 3; evaluation, 3; globes and maps, 3; objectives, 3; reading in social studies, 3; the unit of work, 3; values, 3; sources of content, 7. This last topic included one item each on social sciences, government, current events, economics, geography (post-holing), sociology, and history.

The test was administered to 49 student teachers in their final week of student teaching. None of these students had taken the required course in the teaching of social studies with the writer. The test was distributed so that alternate students took Part II, the Example items, first.

Responses were scored and analyzed as shown in the Findings section.

Specific Questions and Hypotheses

The following specific questions and hypotheses were formulated to provide answers to general questions 3 and 4 in the Need for the Study section.

Questions:

1. What is the correlation between Practice scores on the Practice first form and Practice scores on the Example first form?

2. What is the correlation between Practice scores on the Practice first form and Example scores on the Example first form?

3. What is the correlation between Practice scores on the Practice first form and Example scores on the Practice first form?

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11. What is the correlation between Practice scores and Example scores of the Practice first form and Example score of the Practice first form and Practice score of the Example first form?

12. What is the correlation between Practice scores and Example scores of the Example first form and Practice score of the Practice first and Example first forms?

13. What is the correlation between Practice scores and Example scores of the Example first form and Example scores of the Practice first and the Example first forms?

14. What is the correlation between Practice scores and Example scores of the Example first form and Practice score of the Practice first form and Example score of the Example first form?

15. What is the correlation between Practice scores and Example scores of the Example first form and Example score of the Practice first form and Practice score of the Example first form?

16. What is the correlation between Practice scores of the Practice first and the Example first forms and Example scores of the Practice first and the Example first forms?

17. What is the correlation between Practice scores of the Practice first and the Example first forms and Practice score of the Practice first form and Example score of the Example first form?

18. What is the correlation between Practice scores of the Practice first and the Example first forms and Example score of the Practice first form and Practice score of the Example first form?

19. What is the correlation between Example scores of the Practice first and the Example first forms and Practice score of the Practice first form and Example score of the Example first form?

20. What is the correlation between Example scores of the Practice first and the Example first forms, and Example score of the Practice first form and Practice score of the Example first form?

21. What is the correlation between Practice score of the Practice first form and Example score of the Example first form, and Example score of the Practice first form and Practice score of the Example first form?

Hypotheses:

1. $H_o : \mu_1 = \mu_2$

   When μ_1 = the mean of the Practice section of the Practice first form

   μ_2 = the mean of the Practice section of the Example first form

2. $H_o : \mu_1 = \mu_2$

   When μ_1 = the mean of the Example section of the Example first form

   μ_2 = the mean of the Example section of the Practice first form

3. $H_o : \mu_1 = \mu_2$

   When μ_1 = the mean of the Practice section of the Practice first form

   μ_2 = the mean of the Example section of the Practice first form

4. $H_o : \mu_1 = \mu_2$

   When μ_1 = the mean of the Practice section of the Example first form

   μ_2 = the mean of the Example section of the Example first form

5. $H_o : \mu_1 = \mu_2$

   When μ_1 = the mean of the Practice section of the Practice first form

   μ_2 = the mean of the Example section of the Example first form

6. $H_o : \mu_1 = \mu_2$

When μ_1 = the mean of the Practice section of the Example first form

μ_2 = the mean of the Example section of the Practice first form

Findings

Specific answers to questions 1 and 2 in the Need for the Study section are presented in Tables 1 through 10, Table 1 being a summary of the following nine tables.

The per cent of correct responses for Part I of the instrument was 61.36; for Part II, 61.74; for both parts, 61.55. It should be borne in mind that the student teachers who responded to the items had not taken course work with the investigator and that their professors were not consulted about the items.

It seems appropriate to mention that a course in educational measurement was not included in these students' programs of study. The explanation for the top ranking of the topic Evaluation in Table 1 lies elsewhere.

Two possible anomalies in Table 1 may be the disparities between Evaluation and Objectives, and between Unit of Work and Discussion and Committees. In both instances, the topics ranking lower are integral parts of the topics ranking higher. This is a matter deserving further inquiry.

It is interesting to note that in Tables 4 and 6 the student teachers showed considerably more knowledge about the methodology of the topic than about the definition of the topic. In a way,

something on the same order is evident in Table 7, in which there is shown more knowledge of discrete parts of the topic than of the over-arching summary of the topic. These observations lead to speculation about the extent to which these student teachers could have reasoned *why* they chose the correct methodology.

The traditional dominance of history in the social studies is reflected in Table 10. The respondents showed slightly more familiarity with History alone than they did with the components of social studies (Social Sciences), the subject of the instrument!

The term "intersection" in Tables 1 through 10 refers to the frequency of pairs of correct responses on the instrument; that is, the number of students who answered correctly both the Practice and the Example items of pairs. In general, the number of intersections tended to be comparable with the total number of correct responses; but some exceptions occurred, as in Table 3 (Unit Resource Collection, Practice First), Table 6 (Primacy, Practice First), Table 7 (Orientation), and Table 10 (Economics, Geography, and Sociology). In each of these topics, in other words, there were contrasting numbers of students who recognized either the correct Practice or the correct Example and the number who recognized both. For instance, in Table 6, in Primacy, 23 students correctly chose "the objectives of the lesson" in answer to the question as to what comes first in planning a lesson in social studies, and 14 students correctly chose "What shall I teach them?" in answer to the corresponding situational question; but only three students recognized the equivalency of the answers. It is possible that the situational answer should have

read, "What do you want the children to learn?" or, because the central figure in the situational item is a student teacher, perhaps the respondents momentarily lost their academic objectivity through identification. But neither of these reasons would explain the inconsistencies elsewhere in the instrument. This is an interesting question for further investigation.

In summary, then, the answer to general questions 1 and 2 is that the students demonstrated just above 60 per cent accuracy in identifying the Practices and the Examples, and that several patterns in the responses gave rise to new questions.

Specific questions and hypotheses were developed to answer general questions 3 and 4. Answers to the 21 separate questions may be found in Tables 11 and 12.

Specific questions 1 through 6 are answered in Table 11. Obviously, the correlations (Pearson Product-Moment) are of high order; even the lowest ones may be considered high, showing a marked relationship.

Specific questions 7 through 21 are answered in Table 12. The correlations are very high, showing dependable relationships. The students' responses were not distributed significantly differently among any parts of the instrument, nor were they distributed significantly differently on the basis of the part of the instrument taken first.

To summarize the answers to the specific questions (1 through 21) then, we may say that correlations between all combinations of

scores and sets of scores obtained on the instrument were at least high; most of them were very high.

Consideration of the six hypotheses listed in the Need for the Study section concludes the answering of general questions 3 and 4. The hypotheses were tested as indicated in Tables 13 through 18. All the hypotheses were sustained.

It may be worth noting that students (not the student teachers in this study) who more recently have taken the test in fairly large numbers have insisted that there is an advantage in responding to the Example section first. It would be interesting to determine whether students who are persuaded thus contribute to the lowered correlations in Table 11 and to the higher variances in Tables 13, 14, 16, and 18.

To summarize the evidence adduced in answer to general questions 3 and 4, it seems fair to say that there was great correspondence between the student teachers' responses to the Practice items and the Example items; and that though some differences may possibly be attributed to taking one section of the test first (Example) rather than the other, the differences were not found to be statistically significant.

Conclusions and Speculations

Statements which seem to be supported by the evidence presented are these:

1. The student teachers in this study identified "passable"

(in this institution) numbers of items in both sections (Practice and Example) of the instrument.

2. The student teachers performed equally well in both sections of the instrument irrespective of the section they responded to first.

3. The data gave rise to questions which appear to merit further pursuit.

It may be reasonable to conclude then that a pencil and paper test of multiple choice items covering some of the essential cognitive outcomes of a methods and curriculum course may consist of items that have been called in this study Practice, or Example, or both, and that there is no need to develop paired items, as was done in this study.

Overleaping the logical next step in the development of this particular instrument, viz. establishing its reliability against performance criteria, we may conjecture that a pencil and paper instrument may be developed which will predict with acceptable accuracy whether or not a student teacher, given reasonable opportunity, will implement a practice or procedure about which he is knowledgeable.

Two bases for such speculation come to mind. First, the developing of the instrument will force the professor to select only the most important outcomes of his course. The simple logistics of the testing situation will dictate this. Second, repetition will focus the students' attention upon these selected outcomes. Having responded to the items as a pre-test in his student teaching experience, the study may be expected to draw an inference about the importance of these items. (Indeed, it would seem defensible to

demand his drawing that inference and mastering the items as a condition of admission to student teaching.) The upshot of this arrangement would be the student's concentration upon fewer practices and the consequent likelihood of his greater success with them.

Further strengthening of this speculation is offered by the mean scores obtained on the instrument. The (roughly) 60%-40% division provides, all other things being equal, a defensible discrimination between students who knew the correct responses and those who did not. To the extent that not knowing presages not doing (we tend to dwell overmuch on the uncertainties of the converse), we may find the instrument enabling us to establish cutting scores.

Entwined with the effect of the instrument upon the student is its effect upon the professor. Beyond its forcing him to select the most essential outcomes of his course, what else may we anticipate? One possibility is his teaching better the learnings sampled by the test. "Teaching (to) the test" is not necessarily always malpractice. The professor is likely to be especially diligent about the most reliable indicators (items).

If the instrument is to be predictive, the professor not only will have to succeed in teaching the student the correct practices, he also will have to convince the student that these practices are very important, so important that they *must* be taught, and as successfully as possible. When too many practices are presented too casually, students tend to value them lightly. (Presenting first maps in the horizontal plane seems to many teachers nothing more

than an academic nicety; so thousands of young children learn that north is up.) The student teacher will have to take, and if necessary, make opportunities to teach and reinforce these particular essential learnings. Cooperating teachers who have been lackadaisical in these matters will join the effort or be dissociated. In this way, the instrument may be viewed as a means of upgrading classroom teaching in the elementary school.

The cooperating teacher should find the results of the instrument useful. Given an inventory of the student's strengths and weaknesses, he will be able better to direct his energies. Administration of the test at the end of the student teaching experience will help the cooperating teacher assess his effectiveness with the student teacher.

Because of an initial hunch that exemplifications might aid the students' recognition of correct practices, the writer finds the evidence to the contrary very interesting. It may be that a more powerful analysis would divulge a relationship now invisible. The phenomenon of some students' feeling that an advantage lay in responding to the Example section first may be just that--a feeling. It is possible that some kind of affective input was contributed by students of a given emotional structure.

TABLE 1

MEAN AND STANDARD DEVIATION FOR CORRECT RESPONSE TOTALS UNDER EACH TOPIC OF THE INSTRUMENT

Topics ranked by total correct response	Correct Responses (TP=31) Practice First (N=24) M	SD	Example First (N=25) M	SD
Evaluation	19.17	1.09	19.17	1.29
Unit of Work	14.00	1.32	18.33	1.26
Values	16.67	1.62	15.00	1.20
Reading in Social Studies	14.83	1.06	14.67	0.85
Objectives	15.00	0.78	14.33	1.24
Globes and Maps	13.00	0.93	16.17	0.91
Discussion	14.17	1.09	14.50	0.90
Committees	15.50	0.88	13.17	1.22
Sources of Content	13.43	1.82	14.00	2.05

TABLE 2

TOTALS FOR ITEMS UNDER THE TOPIC *EVALUATION*, AND MEANS AND STANDARD DEVIATIONS ACROSS ITEMS UNDER THE TOPIC *EVALUATION* FOR BOTH FORMS OF THE INSTRUMENT

Topics and Items	Correct Responses: Practice First			Example First		
	Total	M	SD	Total	M	SD
Evaluation						
Basis (5, 45)						
Practice	13			13		
Example	20			20		
Intersection	13			12		
Pre-and post-test (6, 46)						
Practice	22			23		
Example	23			22		
Intersection	21			21		
Sources of data (8, 48)						
Practice	17			17		
Example	20			20		
Intersection	16			13		
Across Groups		19.17	1.09		19.17	1.29

TABLE 3

TOTALS FOR ITEMS UNDER THE TOPIC *UNIT OF WORK*, AND MEANS AND STANDARD DEVIATIONS ACROSS ITEMS UNDER THE TOPIC *UNIT OF WORK* FOR BOTH FORMS OF THE INSTRUMENT

Topics and Items	Correct Responses: Practice First Total	Practice First M	Practice First SD	Example First Total	Example First M	Example First SD
Unit of Work						
Unit resource collection (14, 54)						
Practice	11			12		
Example	16			20		
Intersection	7			10		
Management (19, 59)						
Practice	10			20		
Example	8			18		
Intersection	6			15		
Characteristics (24, 64)						
Practice	18			19		
Example	21			21		
Intersection	16			17		
Across Groups		14.00	1.32		18.33	1.26

TABLE 4

TOTALS FOR ITEMS UNDER THE TOPIC *VALUES*, AND MEANS AND STANDARD DEVIATIONS ACROSS ITEMS UNDER THE TOPIC *VALUES* FOR BOTH FORMS OF THE INSTRUMENT

Topics and Items	Correct Responses: Practice First			Example First		
	Total	M	SD	Total	M	SD
Values						
Clarification (15, 55)						
Practice	17			21		
Example	23			19		
Intersection	17			17		
Definition (17, 57)						
Practice	4			2		
Example	14			10		
Intersection	3			2		
Clarification (20, 60)						
Practice	21			18		
Example	21			20		
Intersection	18			15		
Across Groups		16.67	1.62		15.00	1.20

TABLE 5

TOTALS FOR ITEMS UNDER THE TOPIC *READING IN SOCIAL STUDIES*, AND MEANS AND STANDARD DEVIATIONS ACROSS ITEMS UNDER THE TOPIC *READING IN SOCIAL STUDIES* FOR BOTH FORMS OF THE INSTRUMENT

Topics and Items	Correct Responses: Practice First Total	Practice First M	Practice First SD	Example First Total	Example First M	Example First SD
Reading in Social Studies						
Comprehension (3, 43)						
Practice	22			24		
Example	22			22		
Intersection	20			21		
Readability (13, 53)						
Practice	2			1		
Example	6			0		
Intersection	2			0		
Readiness (18, 58)						
Practice	18			20		
Example	19			21		
Intersection	18			18		
Across Groups		14.83	1.06		14.67	0.85

TABLE 6

TOTALS FOR ITEMS UNDER THE TOPIC *OBJECTIVES*, AND MEANS AND STANDARD DEVIATIONS ACROSS ITEMS UNDER THE TOPIC *OBJECTIVES* FOR BOTH FORMS OF THE INSTRUMENT

Topics and Items	Correct Responses: Practice First Total	Practice First M	Practice First SD	Example First Total	Example First M	Example First SD
Objectives						
Behavioral terms (1, 41)						
Practice	21			21		
Example	23			19		
Intersection	21			18		
Concept defined (4, 44)						
Practice	2			7		
Example	7			9		
Intersection	0			2		
Primacy (16, 56)						
Practice	23			22		
Example	14			8		
Intersection	3			6		
Across Groups		15.00	0.78		14.33	1.24

TABLE 7

TOTALS FOR ITEMS UNDER THE TOPIC *GLOBES AND MAPS*, AND MEANS AND STANDARD DEVIATIONS ACROSS ITEMS UNDER THE TOPIC *GLOBES AND MAPS* FOR BOTH FORMS OF THE INSTRUMENT

Topics and Items	Correct Responses: Practice First Total	M	SD	Example First Total	M	SD
Globes and Maps						
First maps (2, 42)						
Practice	22			24		
Example	22			22		
Intersection	20			21		
Pedagogical sequence (9, 49)						
Practice	10			11		
Example	2			7		
Intersection	1			5		
Orientation (21, 61)						
Practice	8			19		
Example	14			14		
Intersection	4			10		
Across Groups		13.00	0.93		16.17	0.91

TABLE 8

TOTALS FOR ITEMS UNDER THE TOPIC *DISCUSSION*, AND MEANS AND STANDARD DEVIATIONS ACROSS ITEMS UNDER THE TOPIC *DISCUSSION* FOR BOTH FORMS OF THE INSTRUMENT

Topics and Items	Correct Responses: Practice First			Example First		
	Total	M	SD	Total	M	SD
Discussion						
Acceptance of feelings and ideas (7, 47)						
Practice	22			21		
Example	6			2		
Intersection	5			2		
Management (11, 51)						
Practice	4			11		
Example	15			22		
Intersection	4			11		
Controversy (22, 62)						
Practice	20			20		
Example	18			11		
Intersection	16			9		
Across Groups		14.17	1.09		14.50	0.90

TABLE 9

TOTALS FOR ITEMS UNDER THE TOPIC *COMMITTEES*, AND MEANS AND STANDARD DEVIATIONS ACROSS ITEMS UNDER THE TOPIC *COMMITTEES* FOR BOTH FORMS OF THE INSTRUMENT

Topics and Items	Correct Responses: Practice First Total	Practice First M	Practice First SD	Example First Total	Example First M	Example First SD
Committees						
Formation (10, 50)						
Practice	11			7		
Example	20			18		
Intersection	10			6		
Goal clarification (12, 52)						
Practice	23			22		
Example	23			21		
Intersection	22			19		
Membership (23, 63)						
Practice	14			10		
Example	2			1		
Intersection	2			0		
Across Groups		15.50	0.88		13.17	1.22

TABLE 10

TOTALS FOR ITEMS UNDER THE TOPIC *SOURCES OF CONTENT*, AND MEANS AND STANDARD DEVIATIONS ACROSS ITEMS UNDER THE TOPIC *SOURCES OF CONTENT* FOR BOTH FORMS OF THE INSTRUMENT

Topics and Items	Correct Responses: Practice First Total	M	SD	Example First Total	M	SD
Sources of Content						
Social sciences (25, 65)						
Practice	24			17		
Example	22			23		
Intersection	22			16		
Government (26, 66)						
Practice	16			14		
Example	13			6		
Intersection	11			5		
Current events (27, 67)						
Practice	7			17		
Example	21			17		
Intersection	6			11		
Economics (28, 68)						
Practice	6			6		
Example	6			14		
Intersection	2			3		
Geography (29, 69)						
Practice	9			9		
Example	8			8		
Intersection	1			4		
Sociology (30, 70)						
Practice	9			12		
Example	2			8		
Intersection	1			5		
History (31, 71)						
Practice	24			22		
Example	21			23		
Intersection	21			20		
Across Groups		13.43	1.82		14.00	2.05

TABLE 11

CORRELATIONS BETWEEN SETS OF SCORES OBTAINED ON ALTERNATE HALF-SECTIONS OF THE INSTRUMENT

	Practice Scores of Example First Form	Example Scores of Example First Form	Example Scores of Practice First Form
Practice Scores of Practice First Form	.90758	.90893	.92884
Practice Scores of Example First Form	------	.83932	.88856
Example Scores of Example First Form	------	------	.94200

TABLE 12

CORRELATIONS BETWEEN SETS OF SCORES OCCURRING IN ALL VARIATIONS OF THE COMPLETE INSTRUMENT WHICH ARE GENERABLE FROM EXISTING HALF-SECTIONS

	Practice Scores and Example Scores of Example First Form	Practice Scores of Practice First and Example First Forms	Example Scores of Practice First and Example First Forms	Practice Score of Practice First Form and Example Score of Example First Form	Example Score of Practice First Form and Practice Score of Example First Form
Practice Scores and Example Scores of Practice First Form	.93210	.92959	.97694	.96269	.97303
Practice Scores and Example Scores of Example First Form	------	.96879	.93896	.96520	.96148
Practice Scores of Practice First and Example First Forms	------	------	.91366	.95907	.96011
Example Scores of Practice First and Example First Forms	------	------	------	.95831	.97068
Practice Score of Practice First Form and Example Score of Example First Form	------	------	------	------	.95914

TABLE 13

t-TEST OF THE HYPOTHESIS THAT THE MEANS OF PRACTICE SECTIONS ARE EQUAL ON BOTH FORMS OF THE INSTRUMENT

Section	N	M	S^2	t
Practice first	24	18.75	5.69	0.561
Example first	25	19.28	15.08	

$t_{.95}(45) = 2.014$

TABLE 14

t-TEST OF THE HYPOTHESIS THAT THE MEANS OF THE EXAMPLE SECTIONS ARE EQUAL ON BOTH FORMS OF THE INSTRUMENT

Section	N	M	S^2	t
Example first	25	18.64	10.55	
Practice first	24	19.67	7.41	1.176

$t_{.95}(45) = 2.014$

TABLE 15

t-TEST OF THE HYPOTHESIS THAT THE MEANS OF THE PRACTICE SECTION AND THE EXAMPLE SECTION ARE EQUAL ON THE PRACTICE-FIRST FORM OF THE INSTRUMENT

Section	N	M	S^2	t
Practice	24	18.75	5.69	
Example	24	19.67	7.41	1.22

$t_{.95}(45) = 2.014$

TABLE 16

t-TEST OF THE HYPOTHESIS THAT THE MEANS OF THE PRACTICE SECTION AND THE EXAMPLE SECTION ARE EQUAL ON THE EXAMPLE-FIRST FORM OF THE INSTRUMENT

Section	N	M	S^2	t
Example	25	18.64	10.55	
Practice	25	19.28	15.08	0.609

$t_{.95}(45) = 2.014$

TABLE 17

t-TEST OF THE HYPOTHESIS THAT THE MEANS OF THE PRACTICE SECTION AND THE EXAMPLE SECTION ARE EQUAL ACROSS THE FORMS OF THE INSTRUMENT IN WHICH PRACTICE AND EXAMPLE SECTIONS WERE PRESENTED FIRST

Section	N	M	S^2	t
Practice (in Practice-First)	24	18.75	5.69	
Example (in Example-First)	25	18.64	10.55	0.132

$t_{.95}(45) = 2.014$

TABLE 18

t-TEST OF THE HYPOTHESIS THAT THE MEANS OF THE PRACTICE SECTION AND THE EXAMPLE SECTION ARE EQUAL ACROSS THE FORMS OF THE INSTRUMENT IN WHICH PRACTICE AND EXAMPLE SECTIONS WERE PRESENTED SECOND

Section	N	M	S^2	t
Practice (in Example-First)	25	19.28	15.08	
Example (in Practice-First)	24	19.67	7.41	0.397

$t_{.95}(45) = 2.014$

Reactions to Dr. Duffey's Paper

1. A possible next step is to use this instrument to pre-test and posttest student teachers. A checklist of behaviors could be prepared which the cooperating teacher could fill out based on her observations. A comparison could then be made between what student teachers know and what they do. This procedure necessitates cooperation among all staff involved in the preparation of pre-service teachers--instructors, cooperating teachers, and supervisory personnel.

2. This instrument can be used as a pre-assessment into a competency-based program. Having pre-assessments will lend itself to the establishment of modules and mini-courses.

3. One possible danger of a program that is totally competency-based is that there may be teaching just for minimal performance. Rather, alternatives to extend and refine skills should be provided and encouraged.

DECODING "DECODING"

Sara A. Moretz
Beth Davey

This paper is an examination of the uses of selected technical terminology in that facet of reading frequently referred to as decoding. The discussion is primarily concerned with the precision and consistency with which particular terms are used in certain reading methods texts.

Technical words serve as vehicles for expressing, in an efficient manner, exact and often complex meanings. Many areas of knowledge, skill, or work utilize a technical vocabulary, that is a unique set of words or word meanings required to adequately comprehend or express ideas in the particular field. The tradit onal professions, the physical and social sciences, the various facets of engineering or the arts are representative of disciplines which use extensive stocks of technical and specialized* terms. Not only these domains which require extensive formal education, but also a variety of sports, crafts, and skills employ technical lexicons.

The cardiologist speaks of a myocardial infarction.
The psychologist describes reciprocal inhibition.
The professional basketball player discusses a moving pick.

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*Words which have technical in addition to general meaning(s), e.g., the term "condition" has a technical or specialized meaning in psychology.

Thus, the value of specialized terms lies in their conveyance of meanings which would otherwise require extended explanations. For example, the Cardiologist does not have to explain the technical terminology he uses when he speaks to fellow professionals. This communication capability is dependent upon the specific and reliable use of terminology.

Technical Vocabulary in Reading

One process which is given a major instructional emphasis in reading is decoding. Within the professional community, however, there is not total agreement as to what is involved in this process. This lack of professional consensus is exemplified in the alternate definitions provided by Hodges and Rudorf (1972), in their recent publication, *Language and Learning to Read: What Teachers Should Know About Language*. The two divergent explanations included in the glossary are these:

1. A term commonly used in reading to refer to the process of rendering written or printed symbols into the speech forms that were originally recorded.

2. A term now also used to refer to the process of translating written or spoken messages to meaning.

The first definition describes a print-to-speech process and makes no reference to meaning, while the second delineates a print-to-meaning process with no mention of an accompanying translation to speech. A third view of decoding given in other literature includes both speech and meaning as process end-products.

Additionally, a variety of terms appear to be used interchangeably with that of decoding. Word recognition, word identification,

and word perception are among those used by various writers to describe equivalent or closely related processes. For example:

Gray (1960) defined *word perception* as the process of "attaching sound and meaning to printed words (p. 30)."

DeBoer and Dallmann (1964) described *word recognition* as "the ability to recognize the sound and meaning of words as they appear on the printed page (p. 83)."

Zintz (1970) discussed "*decoding** the written word so that it is immediately pronounceable and meaningful" as one important set of reading skills to be mastered (p. 14).

Thus, *across* the professional literature there is (1) a lack of agreement concerning the decoding process itself, and (2) a use of different terms to designate identical or similar processes.

Even with this lack of uniformity in vocabulary usage across the profession, students of the discipline should be able to anticipate that individual authors use essential terminology with clarity and consistency *within* a given text. An informal survey of commonly used reading texts suggests that this is not always the case.

A Survey of Selected Reading Terminology

In order to verify these informally acquired impressions concerning the uses of technical vocabulary in the professional literature, a more systematic analysis of their occurrences in selected methods texts was made.

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*Italics added for emphasis.

Terms surveyed included: decoding, word recognition, word perception, word identification, word analysis, word attack, and sight vocabulary (or sight words). Definitions or inferred meanings for each of these terms were derived from 26 reading methods texts. Elementary, secondary, and general texts, as well as several concerned with diagnosis and remediation were included. These texts are listed in Appendix A.

Evidence of each of the following was gathered in the survey:

- conflicting concepts of the decoding process
- multiplicity of terms used to label equivalent processes
- multiplicity of meanings attributed to given terms
- lack of clarity in the use of terms
- inconsistent use of terminology within some writing

Definitions were identified in two predetermined ways. First, each term was located in the index, and the designated occurrences examined in the text. Secondly, some meanings not indexed were located in the text while reading material indexed under one of the other terms. Thus, if authors defined terms on pages which were not indexed directly and which did not include other terms indexed, those particular definitions would not be included in the analysis.

Definitions for each term were classified according to the process or processes delineated: print-to-speech, print-to-speech plus meaning, print-to-meaning, or a combination of these. Within each of these major categories, definitions were classified as directly stated or inferred. Four additional categories were also used. These were labeled: explanation given, and term not located.

Elements of mediation or immediacy in the various processes were not recorded in this analysis.

Each investigator classified occurrences independently. These classifications were subsequently compared and any occurrences divergently classified were reexamined in conference and reclassified by mutual agreement.

Summary of the Findings

From the data presented in Table I, several interesting findings are noted:

1. As a group, the terms are used more often to refer to print-to-speech than to print-to-speech plus meaning.

2. Both print-to-speech and print-to-speech plus meaning are given numerous diverse labels.

3. Individual terms are used to refer to different processes. In fact, all but one term (word identification) designated different processes, and this term was used unclearly in two instances.

4. Examining individual author's clarity of term usage, one finds:

   - some authors use terms without explanation (in 14 cases)
   - some authors explain terms, but in an unclear fashion (17 cases)
   - a few authors contradict their explanations of terms (two cases).

Looking specifically at certain terms, "word recognition" is the most frequently encountered one. Furthermore, it reflects a disagreement by various authors as to the nature of the process to which it refers (seven occurrences of print-to-speech; four occurrences of print-to-speech plus meaning). Five authors explained the

TABLE I

CLASSIFICATION OF VOCABULARY USAGE IN SELECTED TEXTS

	A Print-to-Speech			B Print-to-Speech Plus Meaning			C Print-to-Meaning			D Print-to-Speech Plus Meaning/ Print-to-Meaning			E Explanation Unclear	F Term Used but not Explained or Inferred	G Contradictory Explanations	H Term Not Located
	Directly Stated	Inferred	Total	DS.	I.	T.	DS.	I.	T.	DS.	I.	T.				
Decoding	3	1	4	2	0	2	0	0	0	0	0	0	1	1	0	18
Word Recognition	5	2	7	4	0	4	0	0	0	1	0	1	5	3	2	4
Word Attack	0	3	3	2	0	2	0	0	0	0	0	0	2	1	0	18
Word Analysis	2	2	4	0	1	1	0	0	0	0	0	0	3	1	1	16
Word Perception	0	2	2	1	1	2	0	0	0	0	0	0	2	0	0	20
Word Identification	0	7	7	0	0	0	0	0	0	0	0	0	2	0	0	17
Sight Vocabulary	1	1	2	2	2	4	3	3	6	0	0	0	2	8	0	4

term, but in an unclear fashion. "Sight vocabulary" was the term most frequently designating meaning as a process end-product. It was also the term most often used without explanation (eight occurrences).

There are several possible explanations for the lack of clarity and/or consistency observed.

First, the definitions which are most unclear are those which contain "non-behavioral" verbs. Frequently, words such as knowing, recalling, recognizing, and identifying were used without clarification as to the behavior involved. In these instances, the definitions could not be interpreted with certainty.

A factor which appeared to underlie the lack of consistency within certain works is the very nature of the sound/meaning relationship in reading, i.e., the reader's production of one appears to frequently involve the other. Thus, some definitions initially stated one end-product (i.e., sound), but subsequent discussions appeared to imply both sound and meaning as process end-products.

Perhaps most importantly, as many authors point out, the reading process itself is only partially understood. This state of affairs surely directly or indirectly contributes to a lack of clarity in conceptualizing and thus defining subprocesses of reading.

Conclusion

Development of instructional approaches which facilitate students' acquisition of effective decoding strategies must be based on a clear conceptualization of the skills to be acquired and the

process to be mastered. The research and professional dialogue which should underlie these pedagogical plans require an especially careful defining of the various processes and behaviors examined.

It is essential that individual writers clearly and consistently identify the processes which they discuss and for which they describe teaching approaches. Furthermore, students of reading should develop a sensitivity to the multiplicity of meanings which have been attributed to frequently used terms and to the fact that writers conceptualize processes such as decoding in different ways.

In conclusion, the questions of terminology which have been investigated in this initial survey are important ones which deserve serious professional consideration. We urge:

1. continued dialogue and research toward a greater awareness and understanding of decoding and its relationship to the reading process;

2. to the extent possible, development of an agreed upon technical vocabulary within the reading profession; and

3. more immediately, clear and consistent use of terms within individual professional writing.

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Gray, W. S. *On their own in reading.* Chicago: Scott, Foresman, 1960.

Hodges, R., & Rudorf, H. (Eds.) *Language and learning to read: What teachers should know about language.* Boston: Houghton Mifflin, 1972.

Zintz, M. V. *The reading process.* Dubuque, Iowa: William C. Brown, 1970.

Appendix A

Texts Used in Survey

Aukerman, R. C. *Reading in the secondary school classroom.* New York: McGraw-Hill, 1972.

Bond, G. L., & Tinker, M. A. *Reading difficulties: Their diagnosis, and correction.* New York: Appleton, Century & Crofts, 1967.

Chall, J. *Learning to read: The great debate.* New York: McGraw-Hill, 1967.

DeBoer, J. J., & Dallmann, M. *The teaching of reading.* New York: Holt, Rinehart & Winston, 1960, 1964.

Dechant, E. *Improving the teaching of reading.* (2nd ed.) Englewood Cliffs, N. J.: Prentice-Hall, 1970.

Dechant, E. *Reading improvement in the secondary school.* Englewood Cliffs, N. J.: Prentice-Hall, 1973.

Durkin, D. *Teaching young children to read.* Boston: Allyn & Bacon, 1972.

Fry, E. *Reading instruction for classroom and clinic.* New York: McGraw-Hill, 1972.

Guszak, F. *Diagnostic reading instruction in the elementary school.* New York: Harper & Row, 1972.

Harris, A. J. *Effective teaching of reading.* New York: David McKay, 1962.

Harris, A. *How to increase reading ability.* (5th ed.) New York: David McKay, 1970.

Heilman, A. *Principles and practices of teaching reading.* Columbus, Ohio: Charles E. Merrill, 1972.

Herber, H. *Teaching reading in content areas.* Englewood Cliffs, N. J.: Prentice-Hall, 1970.

Karlin, R. *Teaching elementary reading: Principles and strategies.* New York: Harcourt, Brace & Jovanovich, 1971.

Karlin, R. *Teaching reading in high school.* Indianapolis: Bobbs-Merrill, 1964.

Kennedy, E. C. *Classroom approaches to remedial reading.* Itasca, Ill.: F. E. Peacock, 1971.

Markshaffel, N. *Better reading in the secondary school.* New York: Ronald Press, 1966.

Olson, A., & Ames, W. *Teaching reading skills in secondary schools.* Scranton, Pa.: International Textbook, 1972.

Shepherd, D. *Comprehensive high school reading methods.* Columbus, Ohio: Charles E. Merrill, 1973.

Smith, N. B. *Reading instruction for today's children.* Englewood Cliffs, N. J.: Prentice-Hall, 1963.

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Spache, G., & Spache, E. *Reading in the elementary school.* Boston: Allyn & Bacon, 1969.

Strang, R. *Diagnostic teaching of reading.* (2nd ed.) New York: McGraw-Hill, 1969.

Wilson, R. *Diagnostic and remedial reading for classroom and clinic.* Columbus, Ohio: Charles E. Merrill, 1972.

Wilson, R., & Hall, M. *Reading and the elementary school child.* New York: Van Nostrand Reinhold, 1972.

Zintz, M. V. *The reading process.* Dubuque: William C. Brown, 1970.

Reactions to Dr. Moretz's and Dr. Davey's Paper

1. There is a definite need for more precision in terminology used in the field of reading. Individuals themselves need to be aware of the meaning they attach to the terms they use and make an effort to be consistent.

2. The disparity of descriptions of decoding spring in part from the fact that we know very little about the actual decoding process in reading. When is decoding immediate and when is it mediated? There is likely to be a difference between the process used by the beginning reader and that used by the fluent reader.

3. This investigation could be extended to additional reading texts with use of a set of specific criteria for selection of texts to be used in this analysis.

4. Another area that may be pursued is an analysis of these same authors' descriptions of comprehension. Their statements about comprehension may influence their views on decoding. An investigation of definitions of decoding in the manuals of basal readers may prove to be an additional line of inquiry.